

REMARKS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-8 and 10-24 are currently pending. Claim 9 has been canceled without prejudice; and Claims 1-8, 10-12, 14, 17-20, and 22 have been amended by the present amendment. The changes to the claims are supported by the originally filed specification and do not add new matter.

In the outstanding Office Action, the specification was objected to as containing an informality on page 45; Claim 9 was rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter; Claims 1-8 and 10 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,253,246 to Nakatsuyama (hereinafter “the ‘246 patent”); Claims 11-16 and 19-24 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,763,323 to Nelson et al. (hereinafter “the ‘323 patent”); and Claims 17 and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the ‘246 and ‘323 patents.

Applicants respectfully submit that the objection to the specification is rendered moot by the present amendment to the specification. The specification has been amended as suggested in the Office Action. Accordingly, the objection to the specification is believed to have been overcome.

Applicants respectfully that the rejection of Claim 9 under 35 U.S.C. § 101 is rendered moot by the present cancellation of Claim 9.

Amended Claim 1 is directed to a data processing device, comprising: (1) a plurality of data processing units; (2) a first memory shared for storing data, wherein each of the data processing units makes an access to the first memory so as to perform an operation; (3) a transfer completion time designation unit configured to designate a transfer completion time according to need, wherein transfer of data in response to the accesses made by the data

processing units should be completed within the designated transfer completion time; (4) an expected transfer completion time calculation unit configured to calculate an expected transfer completion time needed for completing the data transfer in response to the accesses made by the data processing units, the expected transfer completion time calculation unit configured to calculate the expected transfer completion time based on a current access status of the first memory; and (5) an access management unit configured to manage the access to the first memory based on the designated transfer completion time and the expected transfer completion time. Claim 1 has been amended for the purpose of clarification only and no new matter has been added.

The '246 patent is directed to a data distribution system configured to transmit compressed data from a data distribution unit to a data receiving unit, wherein the data distribution system includes means for varying a volume of the compressed data transmitted from the data distribution unit according to a send request signal transmitted from the terminal unit. As shown in Figure 1, the '246 patent discloses a data receiver 10 and a data transmitter 20, each having a controller. In this regard, Applicants note that Office Action asserts on page 3 that the controller 16 and the data receiver 10 reads on the claimed plurality of data processing units, and that the claimed first memory recited in Claim 1 is disclosed by the internal memory of the controller 16. However, Applicants note that Claim 1 is directed to a data processing device, but the Office Action asserts that the plurality of data processing units and the first memory are located in the controller of the data receiver 10, while the claimed expected transfer completion time calculation unit is contained in the data transmitter 20 (wherein the data transmitter and the data receiver are coupled over a communication network 30). Accordingly, Applicants respectfully submit that the Office Action is implying that the data receiver 10, the data transmitter 20, and the communication network 30 collectively comprise the data processing device recited in Claim 1. Moreover, Applicants

note that the data transfer referred to in the '246 patent relates to a data transfer between the data transmitter 20 and the data receiver 10, and not to transfers between the memory of the controller 16 and the data processing units contained in the controller 16, as is required if the data processing units and the memory are contained in the controller 16, as asserted by the Office Action. Thus, it is unclear to Applicants how the elements of the data processing device recited in Claim 1 are disclosed by the combination of the data transmitter, the data receiver, and the communication network disclosed by the '246 patent.

Moreover, Applicants respectfully submit that the '246 patent fails to disclose the access management unit configured to manage the access to the first memory based on the designated completion time and the expected transfer completion time recited in Claim 1. In this regard, Applicants note that the claimed access management unit is configured to manage access to the memory based on two calculated values. Applicants note that the Office Action refers to column 2, line 36 of the '246 patent as reading on the access management unit recited in Claim 1. However, an examination of that passage reveals that the '246 patent discloses means for controlling the volume of data transmitted from the transmitting means according to the type of desired data to be transmitted. However that section of the '246 patent does not recite a designated transfer completion time and an expected transfer completion time, or that the access to a first memory is managed based on those two calculated values.

Accordingly, for the reasons stated above, Applicants respectfully traverse the rejection of Claim 1 (and dependent Claims 2-4) as anticipated by the '246 patent.

Independent Claims 5 and 10 recite limitations analogous to the limitations recited in Claim 1. Moreover, Claims 5 and 10 have been amended in a manner analogous to the amendment to Claim 1. Accordingly, for the reasons stated above for the patentability of

Claim 1, Applicants respectfully traverse the rejections of Claim 5 (and dependent Claims 6-8) and Claim 10 as anticipated by the '246 patent.

Amended Claim 11 is directed to an image forming device, comprising: (1) an image input unit; (2) an image output unit; (3) a storage unit configured to store an image signal provided from the image input unit in a primary storage part and to store the image signal stored in the primary storage part and a secondary storage part; (4) a delivery unit configured to deliver the image signal stored in the primary storage part, which image signal is read out from the secondary storage part, to the image output unit; and (5) a priority designation unit configured to allow a user to designate a priority for each of the plurality of image signal input/output operation requests. The changes to Claim 11 are supported by the originally filed specification and do not add new matter.¹

Regarding the rejection of Claim 11 as anticipated by the '323 patent, the '323 patent is directed to a communication system for the transfer of small digital message blocks and large digital message blocks, including a common communication channel, a plurality of nodes connected to the channel (one of the plurality of nodes being designated as a master node), wherein the master node establishes a polling priority for each of the plurality of nodes and polls the nodes having a higher priority more frequently than those nodes having a lower priority. However, Applicants respectfully submit that the '323 patent fails to disclose a priority designation unit configured to allow a user to designate a priority for each of a plurality of image signal input/output operations requests, as recited in Claim 11. Rather, the '323 patent merely discloses that some nodes are polled at a different frequency than other nodes. The '323 patent fails to disclose that a user can designate a priority for image signal input/output requests. Further, Applicants respectfully submit that the '323 patent fails to disclose the primary storage part and the secondary storage part recited in Claim 11. Rather,

¹ See, e.g., Figure 8 and the discussion related thereto in the specification.

the '323 patent merely discloses a remote data storage unit 24. Accordingly, for the reasons stated above, Applicants respectfully submit that the rejection of Claim 11 (and dependent Claims 12 and 13) is rendered moot by the present amendment to Claim 11.

Independent Claim 14 recites limitations analogous to the limitations recited in Claim 11. Moreover, Claim 14 has been amended in a manner analogous to the amendment to Claim 11. Accordingly, for the reasons stated above for the patentability of Claim 11, Applicants respectfully submit that the rejection of Claim 14 (and dependent Claims 15 and 16) is rendered moot by the present amendment to Claim 14.

Independent Claims 17 and 18 recite limitations analogous to the limitations recited in Claims 1 and 11. In particular, Claim 17 recites all the limitations of Claim 1, but also includes the priority designation unit recited in Claim 11. Accordingly, for the reasons stated above for the patentability of Claims 1 and 11, Applicants respectfully submit that Claims 17 and 18 patentably define over any proper combination of the '246 and '323 patents. In particular, Applicants respectfully submit that the '323 patent fails to remedy the deficiencies of the '246 patent set forth above for the patentability of Claim 1.

Independent Claim 19 is directed to a data processing device, comprising: (1) a unit configured to receive a plurality of data transfer process requests; (2) a unit configured to calculate a required process time necessary for executing all data transfer processes corresponding to the data transfer process requests in a time-sharing process manner, when at least one data transfer process has a time constraint; and (3) a unit configured to execute in the time-sharing process manner all data transfer processes except for data transfer processes that should be excluded from those data transfer processes to be executed for the purpose of satisfying the time constraint, when the calculated required process time exceeds the time constraint for a relevant at least one data transfer process.

As discussed above, the '323 patent is directed to a communication system for transferring small digital message blocks and large digital message blocks, including a master node that establishes a polling priority for each of the plurality of nodes connected to the communication network. However, Applicants respectfully submit that the '323 patent fails to disclose a unit configured to execute in the time-sharing process manner all data transfer processes except for data transfer processes that should be excluded from those data transfer processes to be executed for the purpose of satisfying the time constraint, when the calculated require process time exceeds the time constraint for a relevant at least one data transfer process. In this regard, Applicants note that the outstanding Office Action on page 8 refers to column 2, lines 50-51 of the '323 patent as disclosing this limitation. However, that passage in the '323 patent merely refers to the polling of different nodes at different frequencies. However, nothing in the '323 patent teaches or suggests the unit configured to execute recited in Claim 19. Accordingly, Applicants respectfully traverse the rejection of Claim 19 (and dependent Claims 20 and 21) as anticipated by the '323 patent.

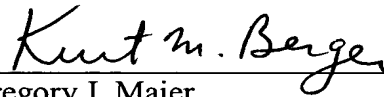
Claim 22 recites limitations analogous to the limitations recited in Claim 19. Accordingly, for the reasons stated above, Applicants respectfully traverse the rejection of Claim 22 (and dependent Claims 23 and 24) as anticipated by the '323 patent.

Thus, it is respectfully submitted that independent Claims 1, 5, 10, 11, 14, 17-19, and 22 (and all associated dependent claims) patentably define over any proper combination of the '246 and '323 patents.

Consequently, in view of the present amendment and in light of the above discussion, the outstanding grounds for rejection are believed to have been overcome. The application as amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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